

Divisional hurdle rates – randolph corporation

[Business](#), [Company](#)



Introduction The Randolph Corporation is a multidivisional producer of electric sanders, sandpaper, industrial grinders and sharpeners, and coated ceramics. The Corporation also has a real estate development division. The diverse product lines of the company divide the corporation into four divisions, namely, real estate, ceramic coatings, equipment manufacturing and home products. The Randolph Corporation Stock performed below expectations recently, when compared to other player in the industry. The company's main problem is believed to lie in the financial planning processes and in the risk consideration.

To tackle these problems the assistant to the firm's vice president suggests a target capital structure of 45% debt in every division and differing hurdle rates for low, average, and high risk projects. This paper critically reviews the different suggested measures and finally proposes measures that should be taken to improve the performance of the Randolph Corporation. Divisional Hurdle Rates To estimate the hurdle rates for every division of the Randolph Corporation that weighted average cost of capital (WACC) have to be calculated for every division. To apply the formula of the WACC the costs of equity have to be known.

The cost of equity can be determined through the Capital Asset Pricing Model (CAPM). The results for every division's equity cost and the computation of the hurdle rates can be seen in the Appendix. The divisions with higher risk have higher weighted average cost of capital. WACC/Hurdle Rate Real Estate 9. 19% Ceramic Coatings 10. 24% Equipment Manufacturing 10. 55% Home Products 9. 34% Fig. 1: Hurdle rate per division To account for different levels of risks between the company's projects the assistant of the vice

president suggested an inclusion of different levels of risk within every division's capital budgeting procedure.

Managers in the divisions are asked to classify projects as high, average or low risk. Rather risky projects will hereafter be evaluated at a hurdle rate of 1.2 multiplied by the divisional rate, projects of average risk are to be evaluated at just the divisional rate while low risk projects have a hurdle rate of 0.9 multiplied by the divisional rate. This produced the following rates, as shown in figure 2.

WACC/Hurdle Rate	Low Risk	Average Risk	High Risk
Real Estate	8.27%	9.19%	11.02%
Ceramic Coatings	9.22%	10.24%	12.29%
Equipment Manufacturing	9.49%	10.55%	12.66%
Home Products	8.0%	9.34%	11.20%

Fig. 2: Hurdle rate per division and risk level At this time the risk adjustment factors discussed here must be reviewed with a critical eye. According to Brigham & Daves (2007), there is no theory that could serve as a foundation of justification for the size these risk-adjustment factors. The authors say that there is no specific value that can be assigned to accurately adjust for the risk and therefore determine higher or lower discount rates. Corporate Beta & Cost of Capital Taking a weighted average of the four divisional betas gives the overall corporate beta.

The corporate beta is therefore affected by changes of the divisional weights and by changes of the individual beta of the particular divisions. The two following scenarios will illustrate this issue. The Corporate beta increases if the ceramic coating division had a large number of projects with returns exceeding the risk adjusted hurdle rates. When the growth rate of the coatings division surpasses the overall corporate growth rate the division's

assets and thereby its weight will increase moving the corporate beta closer to the beta of the ceramic coatings division.

Since the cost of equity rise with increases of beta, the larger corporate beta should also raise the corporate cost of capital (WACC). How strong such changes are to be is however determined by capital structure and weights on other departments. The corporate beta also increases when the equipment manufacturing division makes heavy investments in projects that are deemed to be more risky than average. Investments in risky projects in the division would raise the division's beta and could then eventually also increase the overall corporate beta, which lets the overall cost of capital rise.

It can take some time for the effects of the risky investments to really be visible in the corporate beta. When this happens depends on the analysis frequencies and on the methods that are employed for beta estimation. It can take time until analysts notice the change in the corporate risk profile because they first need to see the higher volatility of returns of the company. Capital Structure Mrs Barbara Kravitz states to use the corporate target capital structure of 45 percent debt for each division.

Hence, this unique capital structure implies not to account for different application and management in the several divisions. Moreover, some divisions can be threatened not being competitive in their market. This is, because divisions operate in diverse markets with differing market conditions. So the risks are not assigned to the divisions of the company but to the corporate average. For instance, low-risk divisions have to accept higher a higher cost of capital, whereby high-risk divisions have to pay less for their risk relative to the market, i. . this approach does not account for

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risk-adjusted cost of capital. Considering another approach, divisions can issue their own debt, but the corporation guarantees the divisional debt. It is not a great difference to the Kravitz-approach. When the corporation guarantees the divisional debt, this debt can be supposed as to “as-if”-debt, i. e. divisional debt will be issued as if it would be issued by the whole corporation. Therefore, the capital structure is not as equal as with the above mentioned approach, but quite similar.

There is no big difference in the cost of capital for each division, because they do not bear the risk. Cost of capital depends on who bears the risk. Hence, the divisions' costs of capital are very close to each other. But when each division is handled as an own and independent organization that rises its own debt, the cost of capital only depends on this special risk of the underlying division. In this case the divisions have the opportunity to achieve the optimal capital structure based on the risk of the division. This risk can be called as stand-alone risk and the beta coefficient can easily be calculated.

Concerning stand-alone risk, investors may have a higher risk relative to the approach with corporate guarantees, but the division has to pay a higher WACC as well. Beta Value - Market Risk Analysis The outcome of beta estimation is always the historical beta, which offers no future perspective for sure. That is because past events included in the historical beta must not occur in the future. According to Brigham & Daves (2007), beta usually can be estimated through the relationship of company's stock returns and market returns.

Difficulties in estimating beta can arise, if there are differing holding periods and variations in the number of observations included in the estimation. Another problem is the multitude of indexes that represent the similar or quite the same stocks, for example S&P 500 or Wilshire 5000. Despite these indexes are highly correlated, beta estimations can differ. Some modifications of the beta coefficient are the adjusted beta and the fundamental beta. The former tries to transform the historical beta closer to an average beta of 1.0.

The latter seeks to incorporate information concerning the company to achieve a better estimate for beta. Moreover, beta values out of less-developed financial markets are not good estimates and therefore partly biased. Problems in estimating beta for divisions of a corporations could arise if the divisions are too small and therefore can be compared with less-developed financial markets. Hence, beta coefficients could be biased (Brigham & Daves, 2007). Thus we can suggest that beta values are very inconsistent and partly biased. Beta Value - Total Risk Analysis

First, the beta value is known as an estimation for the market risk a corporation is faced to. Therefore, it is difficult to find beta for the total risk of the corporation. Total risk is actually measured by the variance or the standard deviation, respectively. So, if one tries to find beta for total risk, it is also possible to calculate the WACC or the hurdle rates for each division, respectively, because there is a high correlation between divisional betas and project's betas. The latter can be estimated through a Monte Carlo analysis.

The resulting estimates for the variance of the projects can be included in the following formula for beta: $\beta_i = (\beta_i / \beta_M) * \beta_M$. So one gets different beta values for different projects, with what it is possible to calculate the hurdle rates in two steps. First step is to insert the beta in the CAPM to receive the expected return, and second, to calculate the WACC with the new return (Brigham & Daves, 2007). Compensation Plan Randolph's compensation plan cannot work out very well, because the corporation issues a uniform debt ratio in its capital structure.

Therefore, some divisions cannot compete with other business rivals if there are no opportunities to raise the debt ratio for the division. That is, divisional manager are not able to compete with the market and therefore cannot create a high growth in sales or earnings. As the reaction of Debra Brown from the Real Estate Division has shown, this division faces troubles if the debt ratio of 45 percent will be implemented to the corporation. The problem is the unique capital structure for the whole corporation that is not consistent with the incentive-based compensation plan.

Some divisions that do not need a high debt ratio to compete with the market could have a benefit as well as divisional managers will have an advantage to earn more relative to other divisions. So, Randolph should change its capital budgeting procedure in order to enable divisional managers the issuing of debt on their own. With this approach, some interdependences in the corporation would disappear and the divisional managers could concentrate on their division, while not being limited in doing their job. Additional to that, Randolph should also adjust its

compensation plan, because division's ROE strongly varies among the divisions.

That is, because with the new implemented approach in capital budgeting the divisions face differing target capital structures. Thus, they also have differing opportunities to achieve a high or a low ROE. This incentive could be substituted by return on investment (ROI). Divisional managers now have a higher incentive to seek the goals given by the senior management. Conclusion To come to an end, one can see how differing hurdle rates and difficulties in estimating beta coefficient can lead to problems in capital budgeting as well as disparities in the compensation.

Moreover, also the accounting for different risks can influence the calculations for WACC and therefore the hurdle rates. Some approaches cannot be calculated and are based on individual judgments (high/low risk hurdle rates). Finally, an appropriate incentive-based compensation plan can increase manager's motivation on the one hand, and project management or divisional management, respectively, on the other hand. ? Reference List
Brigham, E. , & Daves, P. (2007). Intermediate Financial Management. 9th Edition, Thomson South-Western. Mason Ohio
Divisional Hurdle Rates. (1994). Randolph Corporation . The Dryden Press.